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CLAIMS:

- 1. A method of increasing the feed intake and milk production of lactating dairy animals comprising administering to such animals a feed supplement comprising a mixture of effective amounts of sodium diacetate and sugar.
- 5 2. The method of claim 1 including the step of adding said supplement to mixed feed to produce a feed that is then administered to such animals.
 - 3. The method of claim 1 wherein the weight ratio of sodium diacetate to said supplement is in the range of about 0.2 to 0.7.
 - 4. The method of claim 1 wherein the weight ratio of sugar to said supplement is in the range of about 0.2 to 0.4.
 - 5. The method of claim 1 wherein said sugar comprises monosaccharide or a disaccharide.
 - 6. The method of claim 1 wherein said sugar comprises a monosaccharide selected from the group consisting of dextrose, glucose, fructose and D-ribose.
 - 7. The method of claim 1 wherein said sugar comprises a disaccharide selected from the group consisting of sucrose and maltose.
 - 8. The method of any one of claims 2-4 wherein the percentage by weight of said sugar in said feed is in the range of about 0.09% to 0.35%.
 - 9. The method of any one of claims 2- 4 where the percentage by weight of said sodium diacetate in said feed is in the range of about 0.09% to 0.3%
 - 10. The method of claim 1 wherein said supplement additionally contains one or more of brewer's yeast, bentonite and sodium bicarbonate.

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- 11. The method of claim 1 wherein said supplement contains two or more of brewer's yeast, bentonite and sodium bicarbonate.
- 12. The method of claim 9 or claim10 wherein the total amount by weight of brewer's yeast, bentonite and sodium bicarbonate is not greater than about 50% of the weight of said supplement.
 - 13. The method of claim 1 wherein the dairy animal is bovine, ovine or caprine.
- 14. The method of claim 1 wherein said supplement is administered to dairy animals throughout substantially the entire period of lactation.
- 15. A feed for lactating dairy animals which comprises a mixed feed and, as a feed supplement, a mixture of sodium diacetate and sugar in effective amounts to increase the weight and milk production of said animals.
- 16. The feed of claim 15 wherein the percentage by weight of said sugar in said feed is in the range of about 0.09% to 0.35%.
- 17. The feed of claim 15 wherein the percentage by weight of sodium diacetate in said feed is in the range of about 0.09% to 0.3%.
- 18. The feed of claim 15 wherein the weight ratio of sodium diacetate to said supplement is in the range of about 0.2 to 0.7.
- 19. The feed of claim 15 wherein said sugar comprises a monosaccharide selected from the group consisting of dextrose, glucose, fructose and D-ribose.
- 20. The feed of claim 15 wherein said sugar comprises a disaccharide selected from the group consisting of sucrose and maltose.
- 21. The feed of claim 15 wherein said feed supplement additionally contains one or more of brewer's yeast, bentonite and sodium bicarbonate.

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- 22. The feed of claim 1 wherein said feed supplement contains two or more of brewer's yeast, bentonite and sodium bicarbonate.
- 23. The feed of claim 21 or claim 22 wherein the total amount by weight of brewer's yeast, bentonite and sodium bicarbonate is not greater than about 50% of the weight of said supplement.
- 24. A feed supplement to be added to mixed feed for increasing the weight and milk production of lactating dairy animals, comprising a mixture of effective amounts of sodium diacetate and sugar
- 25. The feed supplement of claim 24 wherein the weight ratio of said sugar to said supplement is in the range of about 0.2 to 0.4.
- 26. The feed supplement of claim 24 wherein said sugar comprises a monosaccharide or a disaccharide.
- 27. The feed supplement of claim 24 wherein said sugar comprises a monosaccharide selected from the group consisting of dextrose, glucose, fructose and D-ribose.
- 28. The feed supplement of claim 24 wherein said sugar comprises a disaccharide selected from the group consisting of sucrose and maltose.
- 29. The feed supplement of claim 24 wherein the weight ratio of said sodium diacetate to said supplement is in the range of about 0.2 to 0.7.
- 30. The feed supplement of claim 24 additionally containing one or more of brewer's yeast, bentonite and sodium bicarbonate.
- 31. The feed supplement of claim 24 contains two or more of brewer's yeast, bentonite and sodium bicarbonate.

32. The feed supplement of claim 30 or claim 31 wherein the total amount by weight of brewer's yeast, bentonite and sodium bicarbonate is not greater than about 50% of the weight of said supplement.